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THE CLAIMS

What is claimed is:

- 5 1. A pliable refractory metal carrier for use in a conformable catalyst member, the carrier having coated thereon an anchor layer which is capable of retaining a catalytic coating applied thereto intact on the carrier when the pliable carrier is bent.
2. The pliable carrier of claim 1 having a plurality of perforations formed therein.
- 10 3. The pliable carrier of claim 1 having a catalytic coating on the anchor layer to provide a conformable catalyst member.
4. The pliable carrier of claim 1, claim 2 or claim 3 comprising a tube.
- 15 5. The pliable carrier of claim 4 wherein the tube is of corrugated construction.
6. The pliable carrier of claim 1 wherein the anchor layer is an intermetallic anchor layer.
- 20 7. A pliable refractory metal carrier comprising:
 - (a) a length of pliable tube having (i) an exterior surface, (ii) an interior surface which defines a tube passageway, and (iii) a plurality of perforations extending along at least a portion of the length of the tube;
 - 25 (b) one or more annular baffles extending radially outwardly from the exterior surface of the tube; and
 - (c) one or more interior closures closing the tube passageway but leaving at least some of the perforations open;
- 30 wherein the annular baffles and the interior closures are staggered relative to each other along the length of the tube, and the perforations are disposed along the length of the tube at least coextensively with the annular baffles and the interior closures whereby one or more perforations are disposed between each pair of interior closures.

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8. The pliable carrier of claim 7 further comprising a plurality of the annular baffles and a plurality of the interior closures, each disposed in spaced-apart relationship along at least a portion of the length of the tube.

5 9. The pliable carrier of claim 1 comprising a plurality of foraminous plate members having opposite faces and disposed in a face-to-face linear array whereby to impart a cylindrical shape to the carrier.

10 10. The pliable carrier of claim 9 wherein the plate members have protrusions extending from their faces, which protrusions serve to space adjacent ones of the plate members from each other.

15 11. The pliable carrier of claim 9 comprising a strip which is accordion-pleated to form a plurality of pleats, which pleats define the plate members.

12. The pliable carrier of claim 11 wherein the plate members have protrusions extending from their faces, which protrusions serve to space adjacent ones of the plate members from each other.

20 13. The pliable carrier of any one of claims 6 through 12 having a catalytic coating on the anchor layer to provide a conformable catalyst member.

25 14. A refractory metal carrier having an elongate body portion which is dimensioned and configured to be mounted within a pipe having an open discharge end, the carrier having coated thereon an anchor layer suitable for having a catalytic coating applied thereto, the carrier having a distal end and a proximal end, the proximal end comprising a mounting member dimensioned and configured to be secured to the open discharge end of the pipe when the body portion of the carrier is disposed within the pipe.

30 15. The carrier of claim 14 wherein the mounting member comprises an annular collar defining a mounting flange which is disposed radially outwardly of the proximal end of the catalyst member and extends in the direction from the proximal end towards the distal end thereof, whereby to define between the mounting flange and the proximal end of the catalyst

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member an annular slot which is dimensioned and configured to receive therein the open discharge end of the pipe, when the body portion of the carrier is disposed within the pipe.

16. The carrier of claim 14 or claim 15 having a catalytic material coated on at least
5 some of the body portion of the carrier, to provide a catalyst member.

17. The carrier of claim 14 or claim 15 wherein the body portion is pliable and the anchor layer is disposed on at least a part of the body portion and is capable of retaining such catalytic coating intact on the carrier when the body portion is bent.
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18. The carrier of claim 17 having a catalytic coating on the anchor layer to provide a conformable catalyst member.

19. A conformable catalyst member comprising at least one pliable, refractory metal
15 carrier having thereon an anchor layer on which is disposed a coating of a first catalytic material, the anchor layer being capable of retaining the catalytic coating intact on the carrier when the pliable carrier is bent, the pliable carrier having disposed therein at least one gas-permeable, pliable plug carrier on which is dispersed a second catalytic material.

20. The conformable catalyst member of claim 19 wherein the pliable plug carrier comprises a metal foam.

21. A conformable catalyst member comprising:

(a) a pliable refractory metal carrier in the form of a length of tube having (i) an
25 exterior surface, (ii) an interior surface which defines a tube passageway and (iii) a plurality of perforations extending along at least a portion of the length thereof;

(b) a plurality of annular baffles extending radially outwardly from the exterior surface of the tube;

(c) a plurality of interior closures closing the tube passageway but leaving at
30 least some of the perforations open; and

(d) a first catalytic material carried on the carrier;

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wherein the annular baffles and the interior closures are staggered relative to each other along the length of the tube, and the perforations are disposed along the length of the tube at least coextensively with the annular baffles and the interior closures.

5 22. The conformable catalyst member of claim 21 wherein the pliable carrier has disposed therein at least one gas-permeable, pliable plug carrier on which is dispersed a second catalytic material.

10 23. The conformable catalyst member of claim 22 wherein the plug carrier comprises a metal foam.

15 24. An assembly of the conformable catalyst member of claim 21, claim 22 or claim 23 and a conduit having an interior surface, the conformable catalyst member being disposed within the conduit to define an annular space between the exterior surface of the pliable carrier and the interior surface of the conduit, the annular baffles being dimensioned and configured to close the annular space and the perforations being disposed at least co-extensively with the annular baffles along the length of the pliable carrier.

20 25. A method of installing a conformable catalyst member into a pipe having an open discharge end, and at least one curved longitudinal segment thereof, the catalyst member comprising a pliable refractory metal carrier on which a catalytic material is coated, the catalyst member having a distal end and a proximal end, and the method comprising the steps of:

25 inserting the distal end of the catalyst member into the open discharge end of the pipe and advancing the catalyst member through the pipe, including bending the catalyst member to conform it to the curvature of the curved longitudinal segment of the pipe, to dispose the proximal end of the catalyst member adjacent to the discharge end of the pipe; and
 securing the catalyst member to the pipe.

30 26. A method of installing a catalyst member into a pipe having an open discharge end, the catalyst member comprising a refractory metal carrier having a catalytic coating thereon, the catalyst member having a distal end and a proximal end, the proximal end having a mounting member dimensioned and configured to be secured to the open discharge end of the

pipe when at least a part of the carrier is disposed within the pipe, the method comprising the steps of:

inserting the distal end of the catalyst member into the open discharge end of the pipe and advancing the catalyst member through the pipe to align the discharge end of the pipe

5 with the mounting member; and

securing the mounting member to the discharge end of the pipe.

27. The method of claim 26 wherein the mounting member comprises an annular collar defining a mounting flange which is disposed radially outwardly of the proximal end of the catalyst member and extends in the direction from the proximal end towards the distal end thereof, whereby to define between the mounting flange and the proximal end of the catalyst member an annular slot which is dimensioned and configured to receive therein the open discharge end of the pipe and the step of advancing the catalyst member through the pipe includes disposing the discharge end of the pipe within the annular slot; and

15 the mounting member is secured to the discharge end of the pipe by securing the mounting flange to the discharge end of the pipe.

28. A method of installing a conformable catalyst member at a selected location in the interior of an exhaust conduit of a source of an exhaust stream, the selected location being accessible via an entryway thereto, and the conformable catalyst member comprising at least one pliable refractory metal carrier having a catalytic coating thereon, the method comprising the steps of inserting the conformable catalyst member into the entryway and advancing it to the selected location by bending the conformable catalyst member to conform it to the shape of the selected location.

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29. The method of claim 28, wherein the exhaust conduit is the exhaust conduit of an internal combustion engine.